

Site Newbiggin Hall, NEWCASTLE UPON TYNE  
 Client Engie  
 Date 21/02/2022  
 Ref AG-75355-Design-Rev A  
 Drawing ref RES869-BHA-ST-XX-DR-A-1200

Assessor  
 Accreditation  
 Tel  
 Web  
 email

Thermal Values				Thermal Mass	Kappa	
Ground Floor	130mm kingspan TF70 or similar	$\lambda$ 0.022	0.13 W/m <sup>2</sup> K	Suspended	75	
Main wall	100mm Brick, 150mm Dritherm 32	$\lambda$ 0.032, 100mm Block	$\lambda$ 0.42, Plaster board on dabs	0.18 W/m <sup>2</sup> K	Block	110
Party walls	Filled and sealed cavity		0.00 W/m <sup>2</sup> K	Block	45	
Roof Cold (PIJ)	400mm mineral wool		$\lambda$ 0.044, 100 between 300 above Joists	0.11 W/m <sup>2</sup> K	Timber, plaster board	9
Windows	Double glazed BFRC g-value 0.44		1.30 W/m <sup>2</sup> K			
Doors			1.10 W/m <sup>2</sup> K			

Heating, Ventilation, L2C etc.				Comments
Air permeability			5.00 m <sup>3</sup>	
Thermal Bridging	Concrete Block Association Calculated $\Psi$ values and 2D thermal models		variable	Y-Value
LE lights	Minimum 80lm/watt		100 %	
Heating	Daikin Altherma, ERGA04EVA + EHBH04E6V		%	
Emitter	Radiators			
Controls	Time and Temperature Zone Control			
Heating Flow Temperature	<55°C			
Domestic Hot Water (DHW)	Sunamp			
Showers	Mixer shower, Default, 11 Litres /min			
Ventilation	Part F, System 3, decentralised Mechanical Extract Ventilation (dMEV)			
Secondary heating	None			
Photovoltaic Panels	PV based on 350watt panels / No Batteries / No heat Storage / No PV Diverter			
Appendix G (FGHRS / WWHRS)	None			
Appendix Q (other Tech)	None			
Overheating	Assumed a minimum of 4 Air Changes			

Property details					AD.L1a 2013 Criterion 1 & CfSH input data										Block Compliance				M & E		Low or Zero Carbon Technologies (L2C)								
Plot N°	House Type	Front Orient	Side	Det	GIFA	DER	TER	DER / TER %	DER <= TER	DfEE	TfEE	DfEE / TfEE %	DfEE <= TfEE	SAP Rating	Band	DER x TFA	TER x TFA	DfEE x TFA	TfEE x TFA	Heating	Ventilation	Orientation	Roof Angle	Min PV Kw Peak	No Panels	Panel size watts	* ASR	Actual PV Peak	* Yield PA
1	A1 (2B/4P)	North	West	Semi	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
2	A1 (2B/4P)	North	East	Semi	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
3	B1 (3B/5P)	West	North	End	75.98	-2.67	28.27	109.44%	PASS	46.43	56.84	18.31%	PASS	104	A	-202.87	1921.53	2843.93	3492.04	ASHP	System 3	East/West	30°	3.50	10	350	913	3.50	2,556.40
4	B1 (3B/5P)	West	Mid		75.98	-1.61	25.90	106.21%	PASS	39.86	48.58	17.94%	PASS	103	A	-172.33	1967.88	3028.56	3691.11	ASHP	System 3	East/West	30°	3.50	10	350	913	3.50	2,556.40
5	B1 (3B/5P)	West	South	End	75.98	-2.91	27.89	110.43%	PASS	45.31	55.58	18.47%	PASS	104	A	-221.10	2119.08	3492.65	4222.97	ASHP	System 3	East/West	30°	3.50	10	350	913	3.50	2,556.40
18	D (1B/2P)	North	East	GF-Flat	46.19	-5.38	30.26	117.77%	PASS	40.51	48.31	16.14%	PASS	106	A	-248.50	1397.71	1871.16	2231.44	ASHP	System 3	South	30°	2.45	7	350	1073	2.45	2,103.08
19	E (1B/2P)	North	East	FF-Flat	58.21	-3.87	30.61	112.64%	PASS	46.21	56.50	18.21%	PASS	105	A	-225.27	1781.81	2689.88	3288.87	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
20	D (1B/2P)	North	GF-Flat		46.19	-5.81	29.86	119.45%	PASS	38.23	46.94	18.55%	PASS	106	A	-268.86	1329.23	1765.84	2168.16	ASHP	System 3	South	30°	2.45	7	350	1073	2.45	2,103.08
21	E (1B/2P)	North	FF-Flat		58.21	-4.53	28.65	115.81%	PASS	40.44	49.66	18.56%	PASS	106	A	-263.69	1667.72	2354.01	2890.78	ASHP	System 3	South	30°	2.45	7	350	1073	2.45	2,103.08
22	D (1B/2P)	North	West	GF-Flat	46.19	-5.38	30.26	117.77%	PASS	40.51	48.31	16.14%	PASS	106	A	-248.50	1397.71	1871.16	2231.44	ASHP	System 3	South	30°	2.45	7	350	1073	2.45	2,103.08
23	E (1B/2P)	North	West	FF-Flat	58.21	-3.87	30.61	112.64%	PASS	46.21	56.50	18.21%	PASS	105	A	-225.27	1781.81	2689.88	3288.87	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
24	A1 (2B/4P)	North	East	End	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
25	A1 (2B/4P)	North	Mid		62.00	-4.49	27.04	116.60%	PASS	38.17	46.66	18.19%	PASS	106	A	-278.38	1676.48	2366.54	2892.92	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
26	A1 (2B/4P)	North	West	End	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
27	B1 (3B/5P)	North	East	End	75.98	-2.07	27.53	107.51%	PASS	43.59	53.85	19.05%	PASS	103	A	-157.28	2091.73	3311.97	4091.52	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
28	B1 (3B/5P)	North	Mid		75.98	-2.67	25.29	110.55%	PASS	37.43	45.96	18.55%	PASS	104	A	-202.87	1921.53	2843.93	3492.04	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
29	B1 (3B/5P)	North	West	End	75.98	-2.07	27.53	107.51%	PASS	43.59	53.85	19.05%	PASS	103	A	-157.28	2091.73	3311.97	4091.52	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
30	A1 (2B/4P)	North	East	End	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
31	A1 (2B/4P)	North	Mid		62.00	-4.49	27.04	116.60%	PASS	38.17	46.66	18.19%	PASS	106	A	-278.38	1676.48	2366.54	2892.92	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
32	A1 (2B/4P)	North	West	End	62.00	-3.65	29.49	112.37%	PASS	45.08	55.22	18.36%	PASS	105	A	-226.30	1828.38	2794.96	3423.64	ASHP	System 3	South	30°	2.80	8	350	1073	2.80	2,403.52
33	F1 (2B/3P)	East	North	Semi	61.64	-6.07	31.99	118.97%	PASS	51.69	64.32	19.63%	PASS	107	A	-374.15	1971.86	3186.17	3964.68	ASHP	System 3	East/West	30°	3.85	11	350	913	3.85	2,812.04